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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,911	10/15/2003	Takeshi Ohwe	3531.68536	6300

7590 09/09/2005

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EXAMINER
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DAVIS, DAVID DONALD

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/685,911

Applicant(s)

OHWE, TAKESHI

Examiner

David D. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryosuke (JP 2000-306226) in view of Kasamatsu et al (US 5,841,608). Ryosuke shows in figure 2 a head slider 21 having an air inlet end 26, an air outlet end 26, and a disk 13 opposing surface opposed to a disk 13, as shown in figure 1. Ryosuke shows in figure 2 head slider 21 including a front rail 23 formed on the disk 13 opposing surface at a longitudinal position adjacent to the air inlet end 26. The front rail 23 has a flat air bearing surface 28 for generating a flying force during rotation of the disk 13. Figure 2 of Ryosuke shows a pair of rear rails 25a & 25b formed on the disk 13 opposing surface at a longitudinal position adjacent to the air outlet end 26. Each of the rear rails 25a & 25b having a flat air bearing surface 36 & 37 for generating a flying force during rotation of the disk 13.

A groove 22 formed downstream of the front rail 23 for generating a negative pressure by expanding air once compressed at the front rail 23 is also shown in figure 2. A transducer 35 formed near the air outlet end 26 at a transverse position where one of the rear rails 25a & 25b are formed is additionally shown in figure 2. Figure 2 further shows plurality of pads 33 formed on the front rail 23 and at least one 49 on the rear rails 25a & 25b.

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Ryosuke continues to show in figure 2 that each of the front rail 23 and the rear rails 25a & 25b has a step surface adjacent to the corresponding air bearing surface and lower in level than the corresponding air bearing surface with each of the pads being formed on the step surface.

Ryosuke continues to also show in figure 2 that each of the front rail 23 and the rear rails 25a & 25b has a step surface adjacent to the corresponding air bearing surface and lower in level than the corresponding air bearing surface with each of the pads being formed on the step surface.

Ryosuke is silent, however, as to each of the pads having a first height, a second height and an inclined upper end surface with a given inclination angle extending from the first to the second height, which is less than or equal to a pitch angle in flying the slider, such that the upstream end of the inclined upper end surface is higher in level than the downstream end thereof. Ryosuke continues to be silent as to each of the pads including a base pad having a first sectional area and an auxiliary pad formed on the base pad with the auxiliary pad having a second sectional area smaller than the first sectional area.

Kasamatsu et al shows in figure 28 that each of the pads has a first height, a second height and an inclined upper end surface with a given inclination angle extending from the first to the second height, which is less than or equal to a pitch angle in flying the slider, such that the upstream end of the inclined upper end surface is higher in level than the downstream end thereof. Kasamatsu et al also shows in figure 28 that each of the pads includes a base pad having a first sectional area and an auxiliary pad formed on the base pad with the auxiliary pad having a second sectional area smaller than the first sectional area.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the pads of Ryosuke with an incline or auxiliary pads as taught by

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Kasamatsu et al. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide pads on a slider with an incline or auxiliary pads so that lubricant can easily move along the incline or auxiliary pads. See column 28, lines 7-12 of Kasamatsu et al.

### ***Response to Arguments***

3. Applicant's arguments filed May 27, 2005 have been fully considered but they are not persuasive. Applicant assert in the first paragraph on page 13 that the applied prior art "teaches a projection having a tapered portion which extends from the top of the projection all the way to the surface or plane of the slider, and not to a second height, as in the present invention." The projection tapered portion does extend from the top of the projection to a second height. Whether or not it continues to the surface or plane of the slider does not preclude the claims from being obvious with respect to the applied prior art.

In the antepenultimate line through the ultimate line of the second paragraph on page 13, applicant contends the following: "The irregularities shown in the Kasamatsu et al. reference does not disclose or suggest the auxiliary pads that are formed on the base pads." As stated supra, Kasamatsu et al also shows in figure 28 that each of the pads includes a base pad having a first sectional area and an auxiliary pad formed on the base pad with the auxiliary pad having a second sectional area smaller than the first sectional area. They are not "irregularities" as purported by applicant.

In line 3 on page 14, applicant maintains that the applied prior art "does not disclose or suggest that the claimed inclination angle which is less than or equal to the pitch angle in flying

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the slider". As stated supra, Kasamatsu et al shows in figure 28 that each of the pads has a first height, a second height and an inclined upper end surface with a given inclination angle extending from the first to the second height, which is less than or equal to a pitch angle in flying the slider, such that the upstream end of the inclined upper end surface is higher in level than the downstream end thereof. Therefore, contrary to applicant assertion the applied prior art does disclose and suggest the claimed inclination angle that is less than or equal to the pitch angle in flying the slider.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

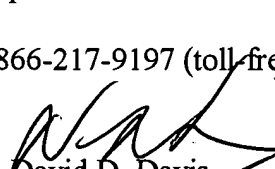
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is 571-272-7572. The examiner can normally be reached on Monday thru Friday between 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David D. Davis  
Primary Examiner  
Art Unit 2652

ddd